

REMARKS

The Office Action dated February 20, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 6, 8-10, 12, 14, 27, 31 and 35-39 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added and no new issues are raised which require further consideration or search.

Claims 6, 14, 27 and 35 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite for reciting the phrase “determining...by means of power measurement.” Applicant has amended claims 6, 14, 27 and 35 to remove the “means” term and has clarified that a power measurement is performed on the idle period. Accordingly, Applicant submit that claims 6, 14, 27 and 35 have overcome the rejection. Withdrawal of the rejection is kindly requested.

Claims 6-21 and 27-30 were rejected under 35 U.S.C. §102(b) as being anticipated by Kuwahara et al. (U.S. Patent Publication No. 2002/0009974). The Office Action took the position that Kuwahara discloses all of the elements of the claims. This rejection is respectfully traversed for at least the following reasons.

Claim 6, upon which claims 7-13 and 36 are dependent, recites a method that includes receiving, in a base station, a time reference signal providing time reference in a telecommunication system. The system also includes generating an idle period in the transmission of a base station, determining, in the base station, time characteristics of the idle period relative to the time reference by performing a power measurement on the idle

period, and timestamping at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

Claim 14, upon which claims 17-21 and 37 are dependent, recites a system that includes a base station configured to provide radio transmission and reception for mobile stations. The base station comprises a time reference signal receiver configured to receive a time reference signal providing time reference in a telecommunication system. The base station comprises an idle period generator configured to generate an idle period in the transmission of the base station. The base station also comprises a detector operationally connected to the idle period generator and the time reference signal receiver. The detector is configured to determine time characteristics of the idle period relative to the time reference by performing a power measurement on the idle period. The system also includes a time stamper operationally connected to the detector and configured to provide at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristics of the idle period.

Claim 27, upon which claims 28-34 and 38 are dependent, recites an apparatus that includes receiving means for receiving, in a base station, a time reference signal providing time reference in the telecommunication system. The apparatus also includes generating means for generating an idle period in the transmission of a base station, and determining means for determining, in the base station, time characteristics of the idle period relative to the time reference by performing a power measurement on the idle

period. The apparatus further includes time stamping means for providing at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

Claim 35, upon which claims 39-44 are dependent, recites an apparatus that includes a time referencing signal receiver configured to receive a time reference signal providing time reference in a telecommunication system. The apparatus also includes an idle period generator configured to generate an idle period in the transmission of a base station. The apparatus further includes a detector operationally connected to the idle period generator and the time reference signal receiver. The detector is configured to determine time characteristic of the idle period relative to the time reference by performing a power measurement on the idle period. The apparatus also includes a time stamper operationally connected to the detector and configured to provide at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristic of the idle period.

As will be discussed below, the teachings of Kuwahara fail to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

The Office Action has maintained the position that eliminating deviation in the transmission by delaying or advancing the transmission corresponds to generating an idle period. The Office Action further alleged that paragraph [0029] of Kuwahara disclosed determining time characteristics of the idle period by performing a power measurement

because the time difference of arrival (TDOA) is calculated using triangulation, which relies on signal strength. Applicants disagree with the alleged interpretations of Kuwahara.

Paragraph [0029] of Kuwahara discloses using TDOA to geo-locate a position measurement using signals received at base stations which are transmitted from a common source. TDOA is a well known geo-location location technique that is used as an overlay to wireless communications networks. The signals are measured as being received at base stations based on the time of arrival of the signals, hence the “time” difference of arrival calculations performed based on the calculated time the signals arrive at various locations. TDOA does not measure power levels of signals. Applicant submits that paragraph [0029] of Kuwahara does not disclose any power measurement or any other form of signal strength indication. Therefore, Kuwahara does not disclose “determining, in the base station, time characteristics of the idle period relative to the time reference by performing a power measurement on the idle period”, as recited, in part, in independent claim 6 and similarly in independent claim 14, 27, 35 and 45 (emphasis added).

In addition to the above noted deficiency, Applicant submits that paragraph [0037] of Kuwahara fails to disclose “timestamping at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period”, as recited, in part, in independent claim 6 and similarly in independent claim 14, 27, 35 and 45 (emphasis added). The Office Action wrongfully relied on paragraph [0037] of Kuwahara as allegedly disclosing this feature of the claims.

Paragraph [0037] of Kuwahara is directed to determining the location of a terminal on the basis of measuring a reception time of a pilot signal and not any idle period. The error information on the transmission timing is measured as a deviation or “offset” from the timing normally expected for the receiving of the transmitted signals (see lines 6-8 of paragraph [0037]). There is no idle period disclosed in Kuwahara. Because Kuwahara fails to teach an idle period, certainly Kuwahara also fails to teach timestamping at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

Kuwahara also fails to disclose “generating an idle period in the transmission of a base station” as recited, in part, in independent claim 6 and similarly in independent claim 14, 27, 35 and 45. The Office Action rejected this feature by relying on the subject matter disclosed in paragraph [0028] of Kuwahara. Applicant submits that paragraph [0028] of Kuwahara discloses elimination of deviations in the timing of signal transmissions of a base station by delaying or advancing the transmission using an “adjustment.” Paragraph [0024] of Kuwahara discloses that the adjustment may include the advancing or delaying of the base station system clock, which effects the start and stop times of a frame transmitted by the base station. The adjustment (delay or advance) is a shift in the time the signal is transmitted or not transmitted but does not occur as an idle period in the transmission as recited in the claims.

Kuwahara also fails to disclose utilizing the idle periods for any purpose because the existence of the adjustment is unpredictable. For example, if a base station in Kuwahara is fully synchronized with the reference clock, then no delay or advance of the

base station system clock will be needed and no adjustment will be generated. If the adjustment is not generated except when a deviation occurs then Kuwahara does not disclose having the ability to use the time characteristics of the idle period when timestamping at least a portion of data to be transmitted from the base station.

Therefore, for at least the reasons stated above, Applicants submit that Kuwahara fails to teach all of the subject matter of independent claims 6, 14, 27, 35 and 45. By virtue of dependency, Kuwahara also fails to teach the subject matter of dependent claims 7-13, 15-21, 28-34 and 36-44. Withdrawal of the rejection of claims 6-21 and 27-39 is kindly requested.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 6-21 and 27-45 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claims Transmittal
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